

## ANNOTATED CLAIMS

What is claimed is:

1. A method for determining thresholds for evaluating inter-system handovers in a wireless communication system, comprising the steps of:

determining a quality level of a first digital duplexing type based on the threshold value for intra-system handover of the first digital duplexing type;

determining a quality level of a second digital duplexing type based on the coverage report from a plurality of multi-mode wireless transmit/receive units (WTRUs); and

comparing the quality levels to determine whether to handover from the first digital duplexing type to the second duplexing type.

2. The method of claim 1, wherein a wireless transmit and receive unit being evaluated for handover is operating in the first digital duplexing type and the quality level of the first digital duplexing type is determined by using primary channel signal levels.

3. The method of claim 2, wherein the quality level of the second digital duplexing type is determined using secondary channel signal levels derived from an estimated quality of a non-used frequency.

4. The method of claim 1, wherein the first digital duplexing type is time division duplex and the second digital duplexing type is frequency division duplex.

5. The method of claim 1, wherein the first digital duplexing type is frequency division duplex and the second digital duplexing type is time division duplex.

6. The method of claim 1, further comprising the steps of:  
determining a primary physical channel control signal level for a wireless transmit and receive unit (WTRU);  
determining the quality level of the first digital duplexing type based on the primary physical control channel signal levels for each of the WTRUs; and  
determining the quality level of the second digital duplexing type based on information provided by WTRUs regarding the extent of coverage of the second digital duplexing type.

7. A method for determining thresholds for evaluating inter-system handovers between a first duplexing type and a second duplexing type in a wireless communications system, the method comprising the steps of:

determining a first minimum quality level for the first duplexing type based on the threshold value for intra-system handover of the first digital duplexing type;

determining a second minimum quality level for the second duplexing type based on the coverage report from a plurality of multi-mode wireless transmit/receive units (WTRUs);

comparing the first minimum quality level with a first threshold and comparing the second minimum quality level with a second threshold; and

initiating a handover from the first duplexing type to the second duplexing type if the first minimum quality level is below the first threshold and the second minimum quality level is above the second threshold.

8. The method of claim 7, wherein the first threshold is an average value of the first minimum quality level values, and the second threshold is an average value of the second minimum quality level values.

9. The method of claim 7, wherein the first threshold and the second threshold are percentile values.

10. The method of claim 7, wherein the first duplexing type is Time Division Duplex and the second duplexing type is Frequency Division Duplex.

11. The method of claim 10, wherein the determining a first minimum quality level step includes calculating the received signal code power of the primary common control physical channel.

12. The method of claim 10, wherein the determining a second minimum quality level step includes calculating the received signal code power of the common pilot channel.

13. The method of claim 10, wherein the determining a second minimum quality level step includes calculating the signal-to-noise ratio of the common pilot channel.

14. The method of claim 7, wherein the first duplexing type is Frequency Division Duplex and the second duplexing type is Time Division Duplex.

15. The method of claim 14, wherein the determining a first minimum quality level step includes calculating the received signal code power of the common pilot channel.

16. The method of claim 14, wherein the determining a first minimum quality level step includes calculating the signal-to-noise ratio of the common pilot channel.

17. The method of claim 14, wherein the determining a second minimum quality level step includes calculating the received signal code power of the primary common control physical channel.

18. The method of claim 7, wherein the first duplexing type and the second duplexing type are the same, and the handover is between different cells of the same duplexing type.

19. A system for determining thresholds for evaluating inter-system handovers between a first duplexing type and a second duplexing type in a wireless communications system, the system comprising:

a plurality of multimode wireless transmit and receive units (WTRUs) capable of operating in both the first duplexing type and the second duplexing type;

a radio network controller (RNC), said RNC including

setting means for setting a minimum quality level for the first duplexing type;

instructing means for instructing each of the plurality of WTRUs to report the extent of coverage of the second duplexing type; and

deciding means for deciding whether to handover a WTRU from the first duplexing type to the second duplexing type; and  
at least one base station communicating between said plurality of WTRUs and said RNC.